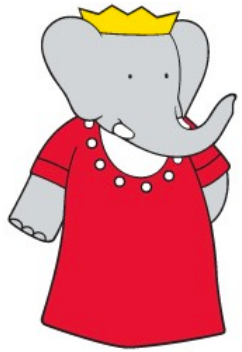
CELESTE
Collisions of Electrons and Something Else

John Haggerty
Brookhaven National Laboratory

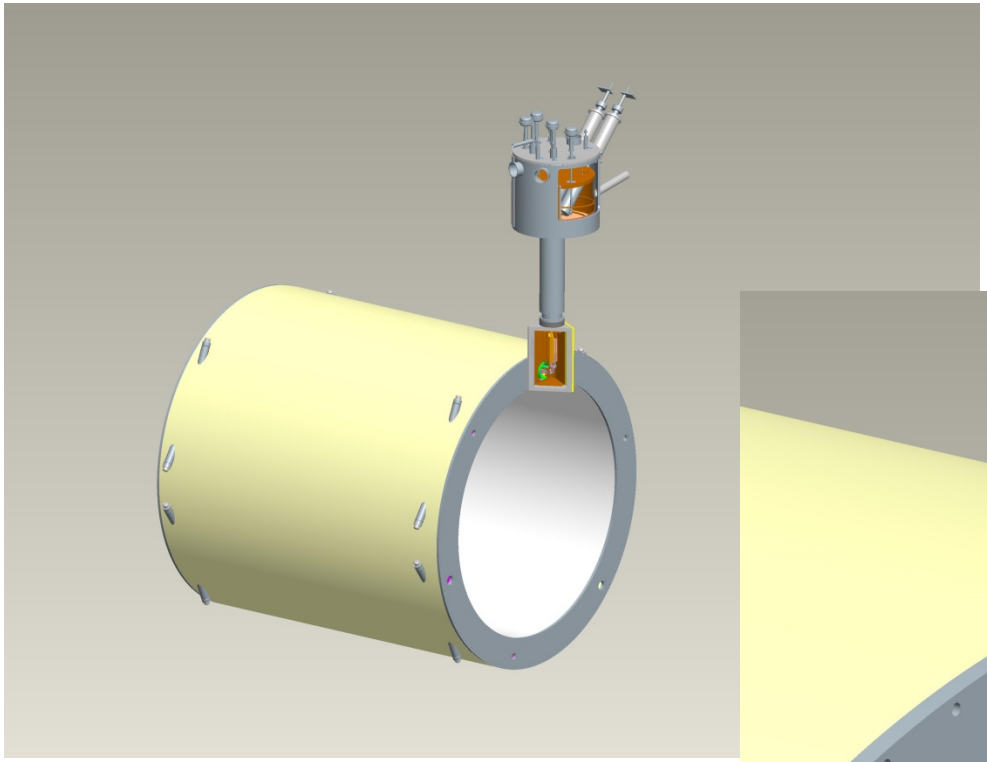


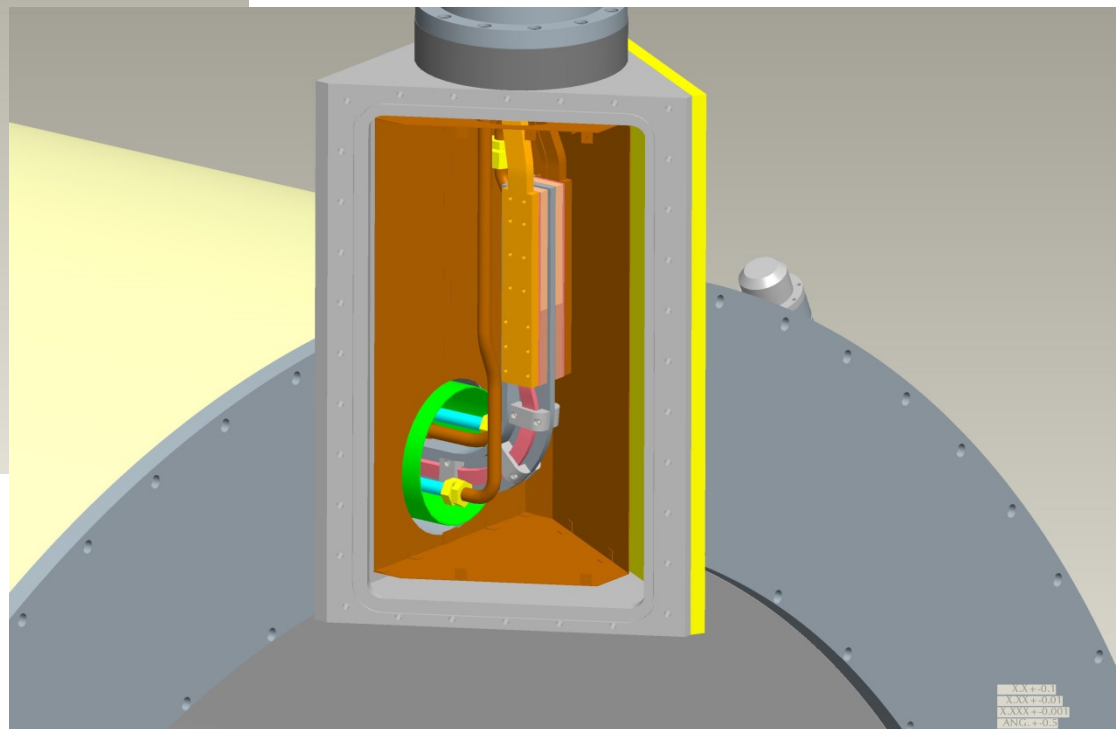
PHENIX

Magnet status

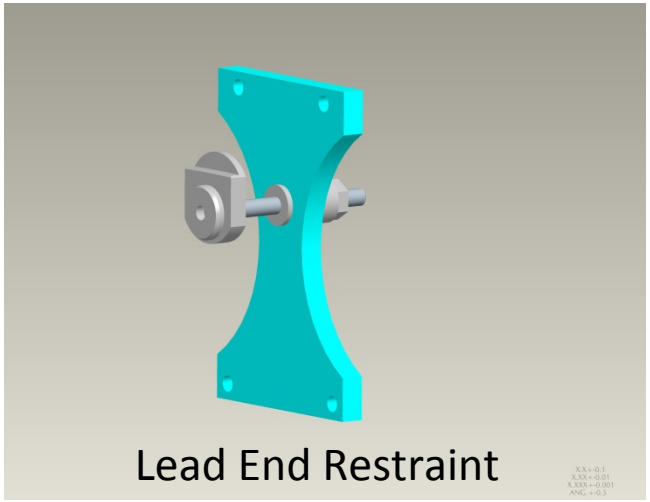
- Clamps for valve box, thermal shield fabricated and delivered by Superconducting Magnet Division
- Valve box crated, and solenoid ready to ship
- Other equipment crated
- Ship date expected to be October 20 or 27

Existing Valve Box Installation



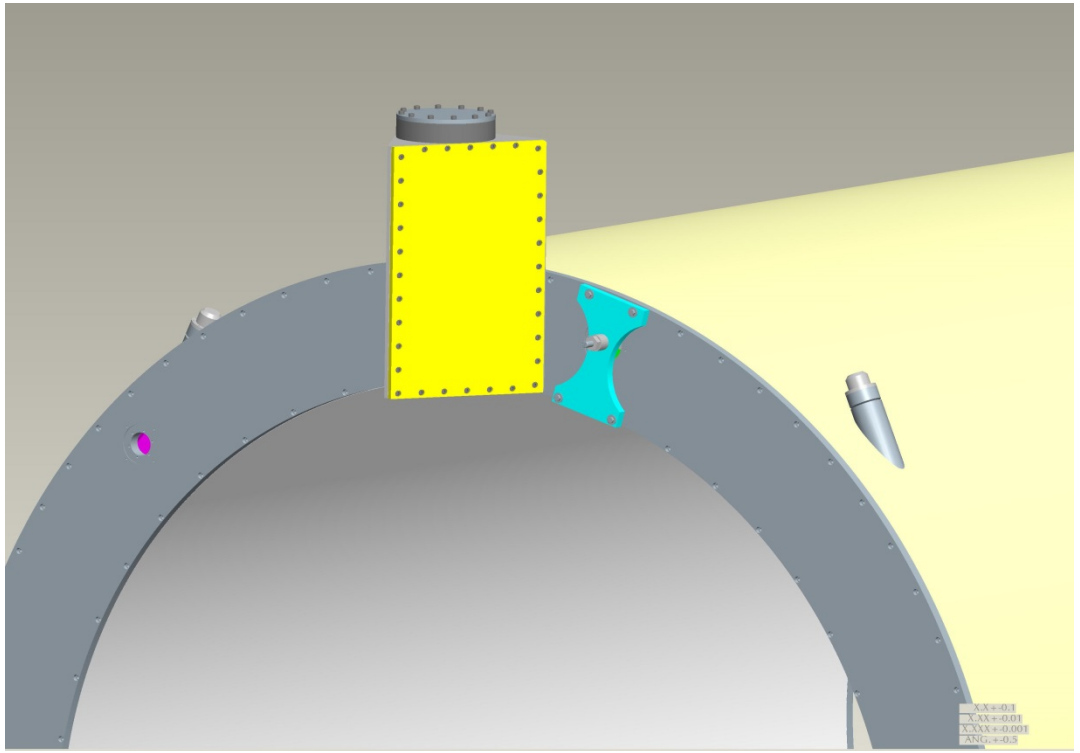


Heat Shield Shipping Restraints



Lead End Restraint

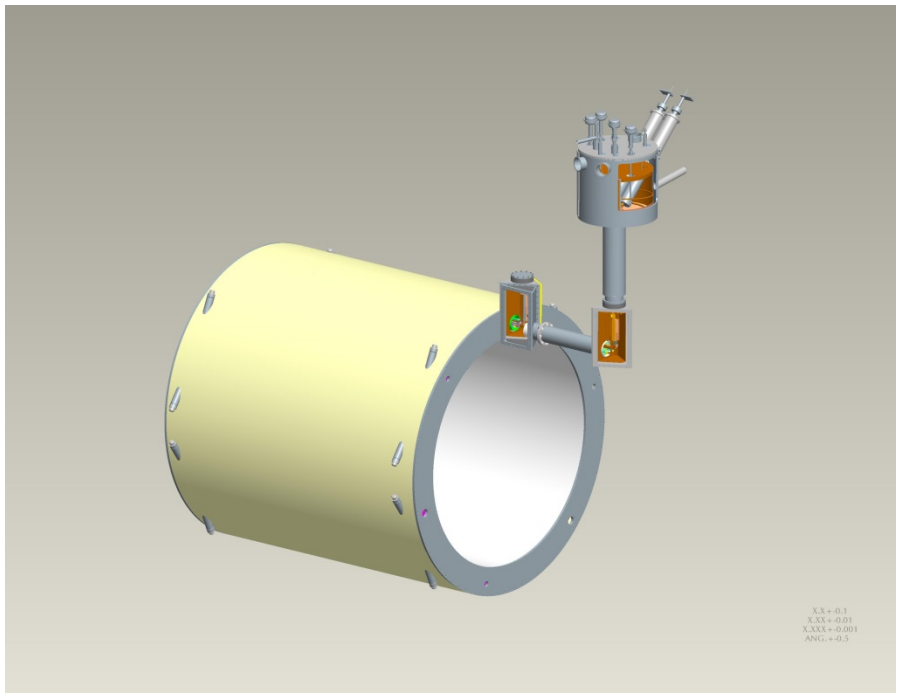
Non-Lead End Restraint

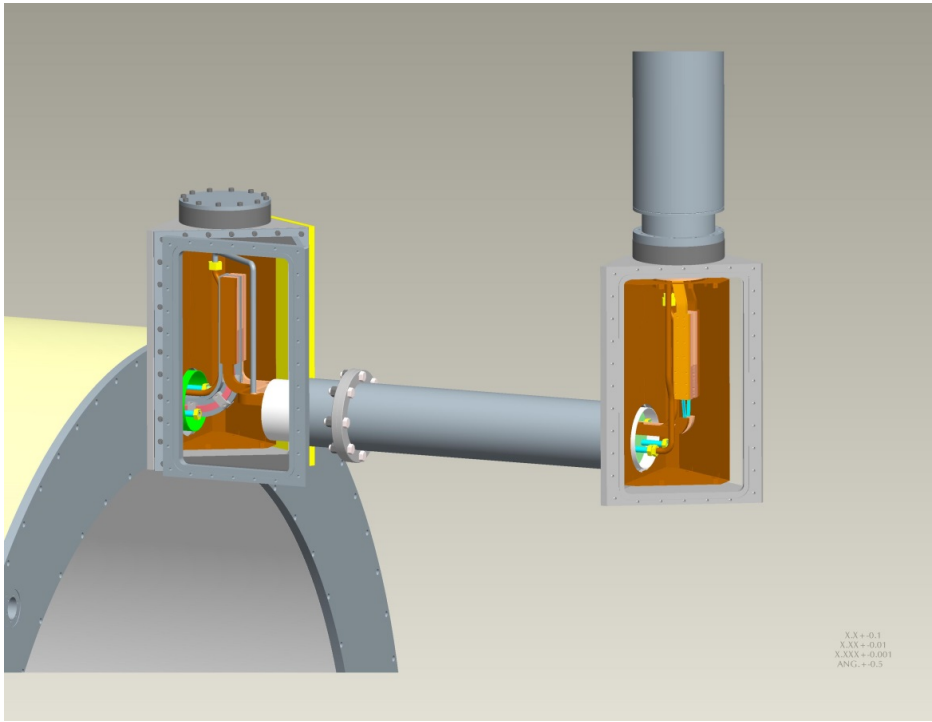


Typical Restraint Installation

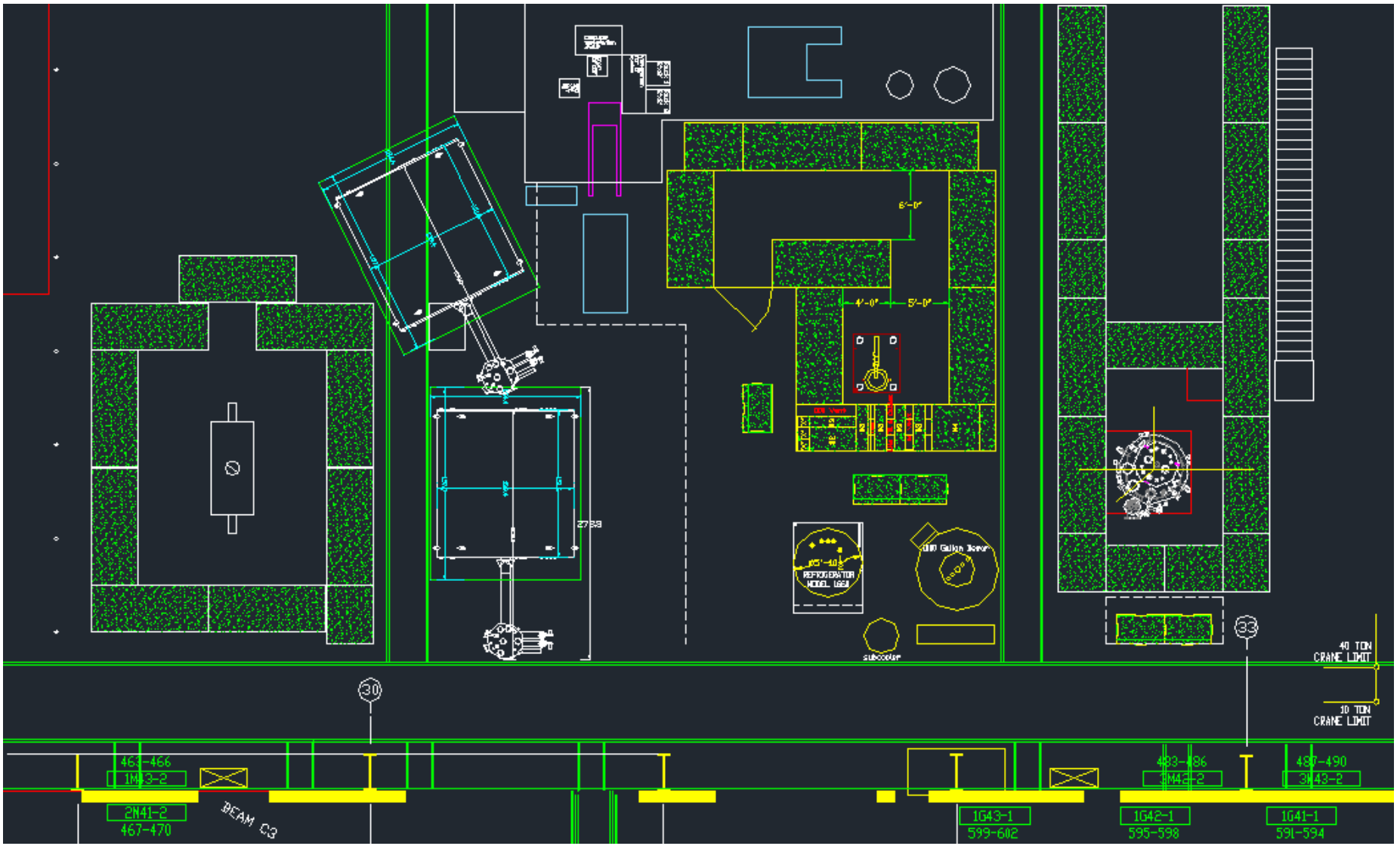
Valve box crated and restrained

Valve Box Relocation

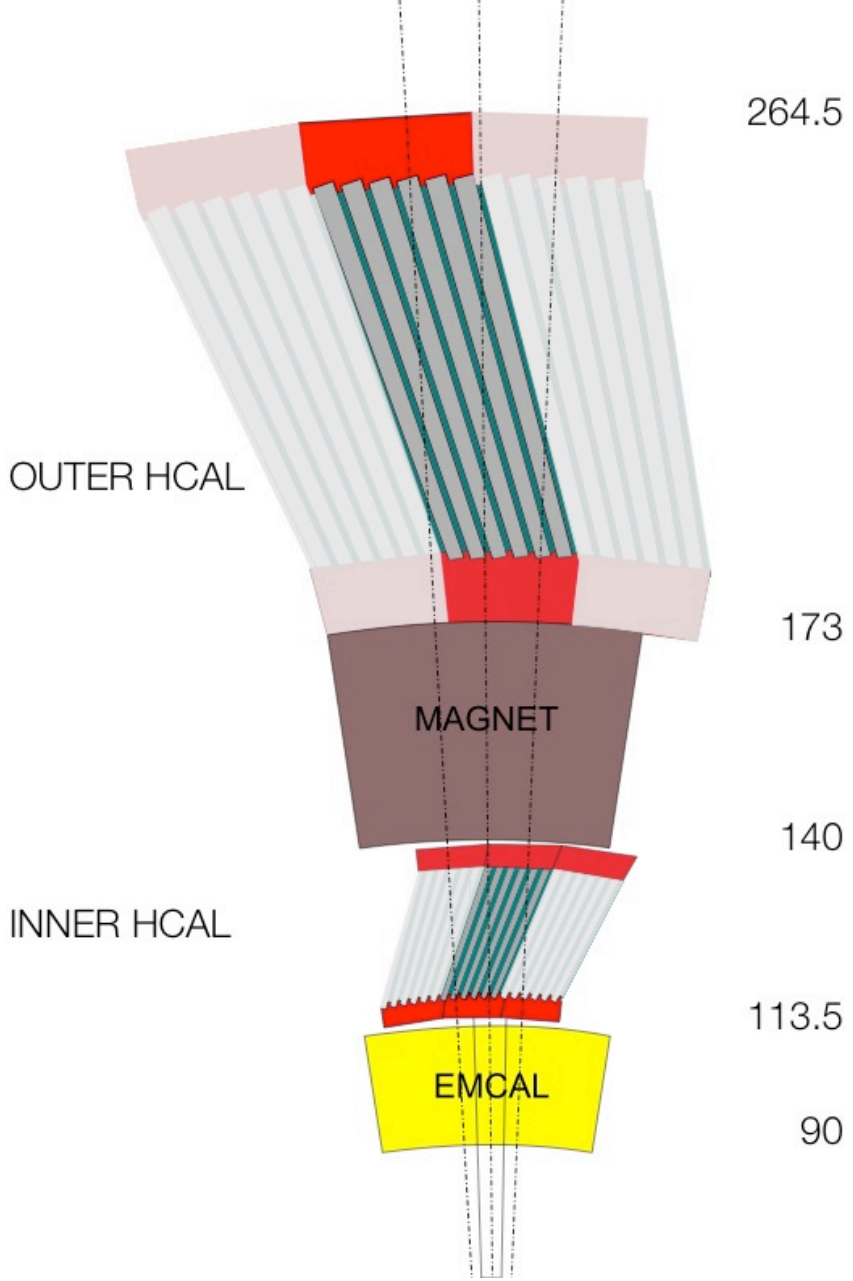


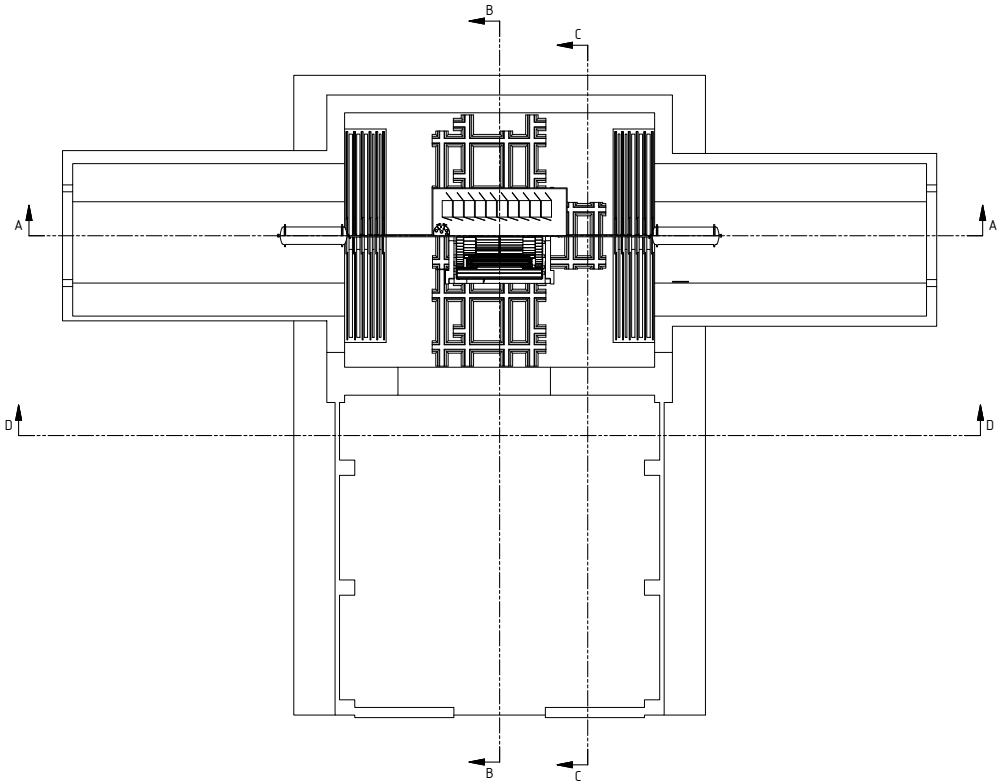


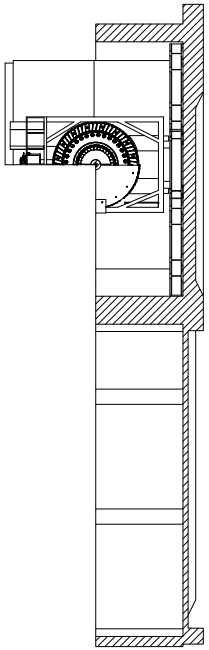
PHENIX


5'-0"
4'-0"
5'-0"
REFRIGERATOR
MODEL 1664
30
33
40 TON
CRANE LIMIT
10 TON
CRANE LIMIT
461-466
1M43-2
2N41-2
467-470
BEAM C3
1G43-1
599-602
1G42-1
595-598
1G41-1
591-594
483-486
3M42-2
487-490
3M43-2

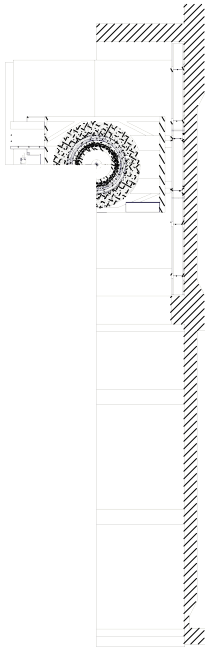
PHOENIX


264.5
OUTER HCAL
173
MAGNET
140
INNER HCAL
113.5
EMCAL
90

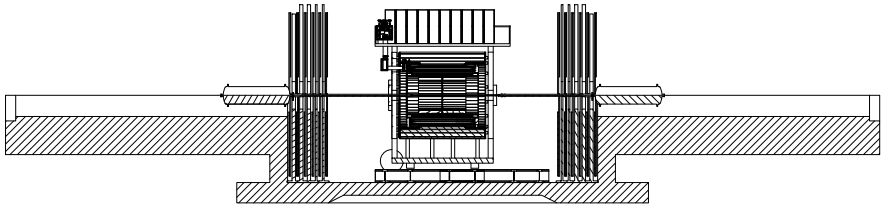




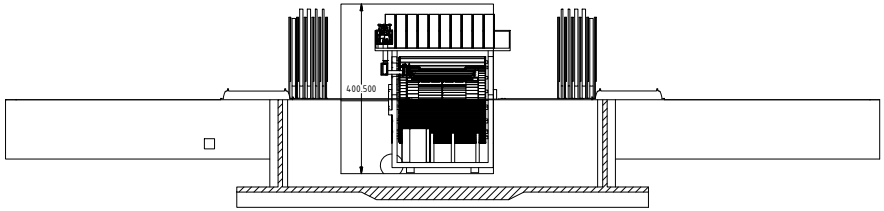
SECTION C-C
SCALE 1 / 100



SECTION B-B
SCALE 1 / 100



SECTION A-A
SCALE 1 / 100



SECTION D-D
SCALE 1 / 100

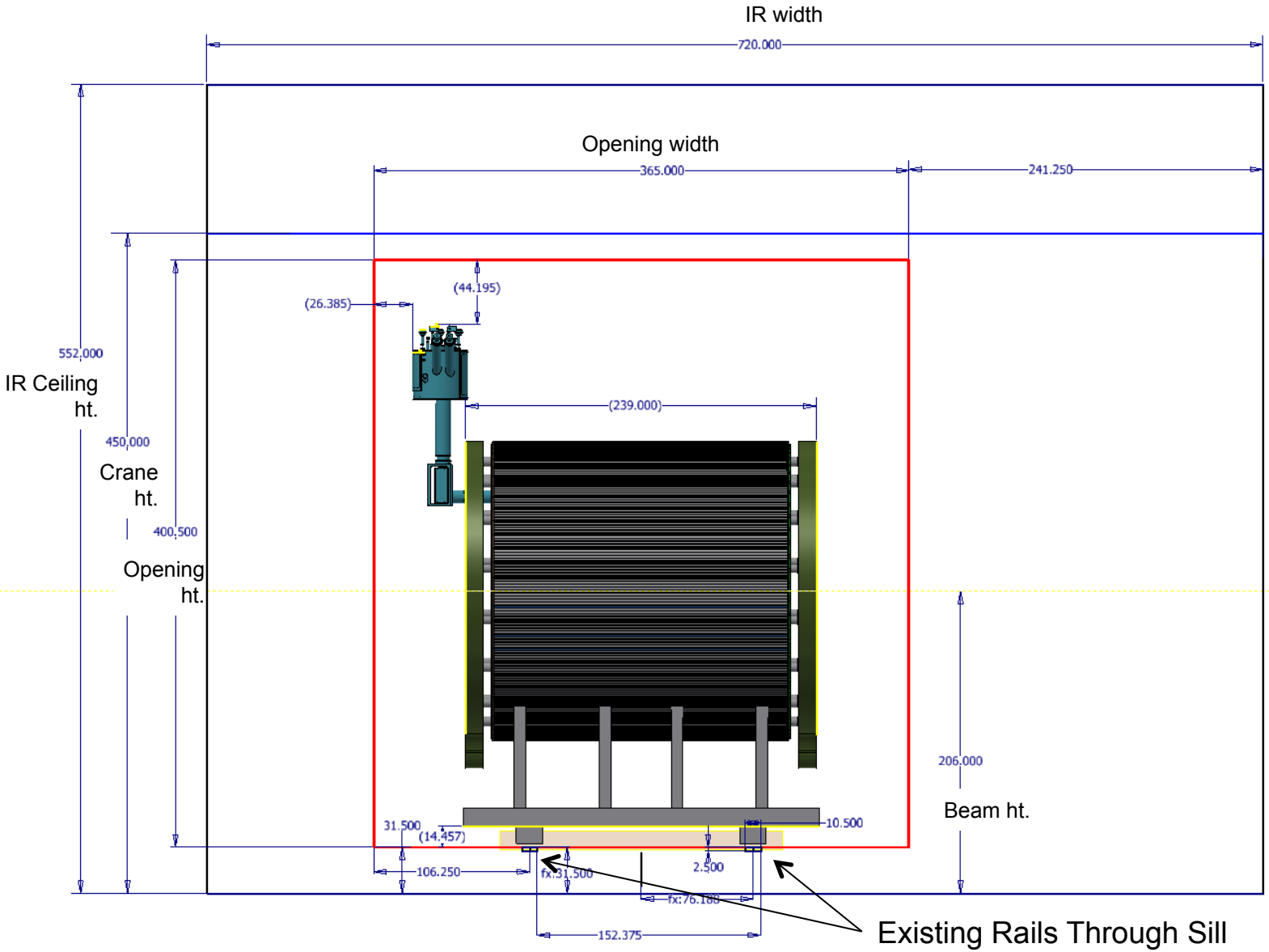
PRELIMINARY

BROOKHAVEN NATIONAL LABORATORY
Upton, NY 11973

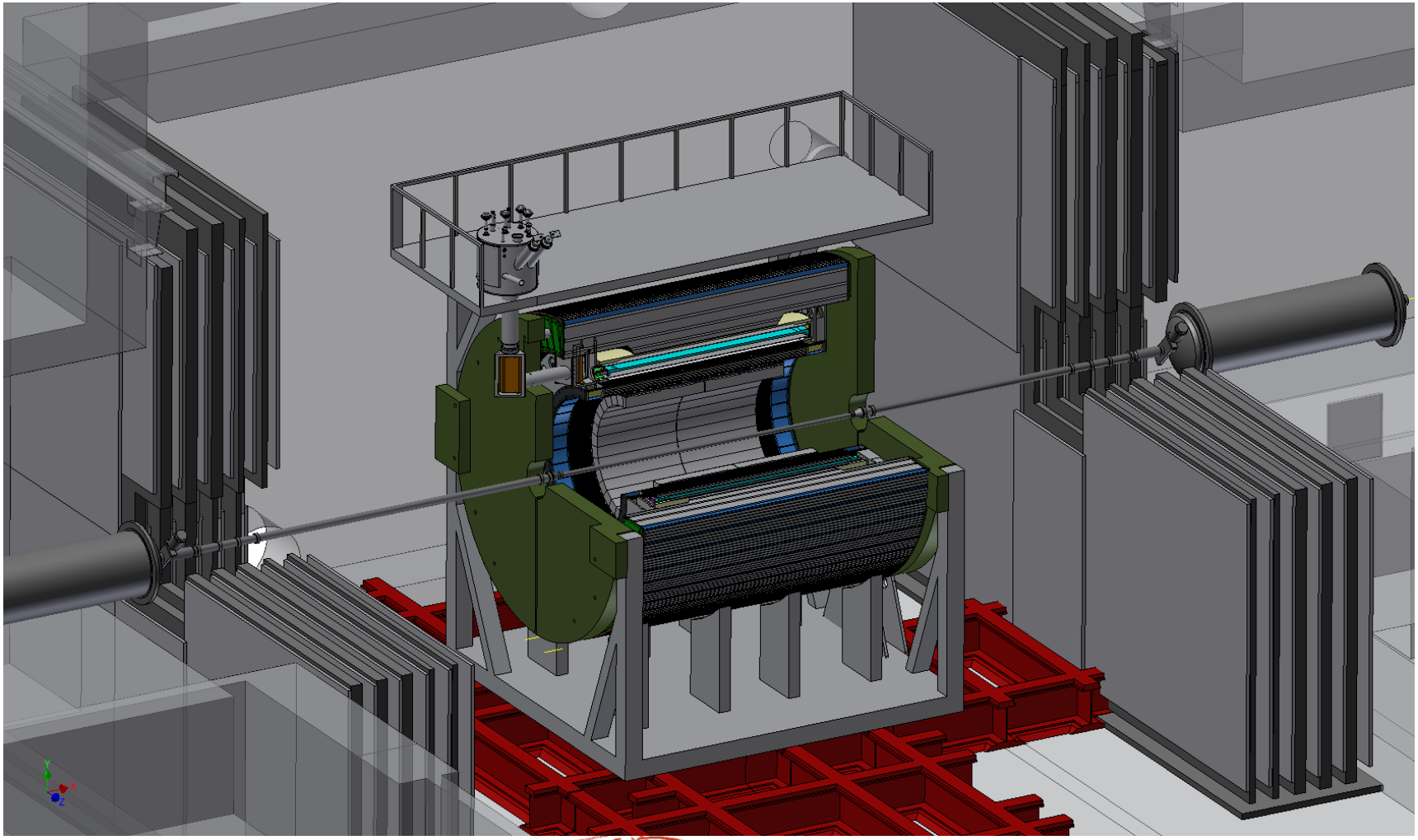
PHENIX

sPhenix-10-8-2014 A

sPHENIX detector shown in PHENIX shield door opening



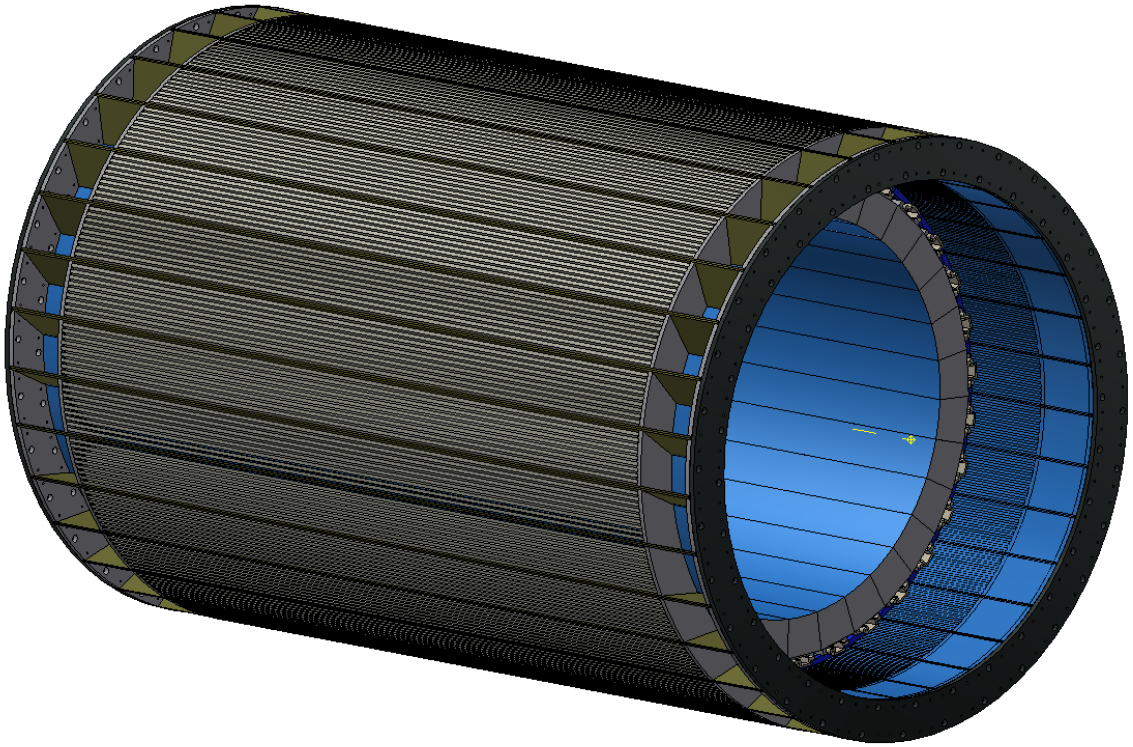
sPHENIX in the hall



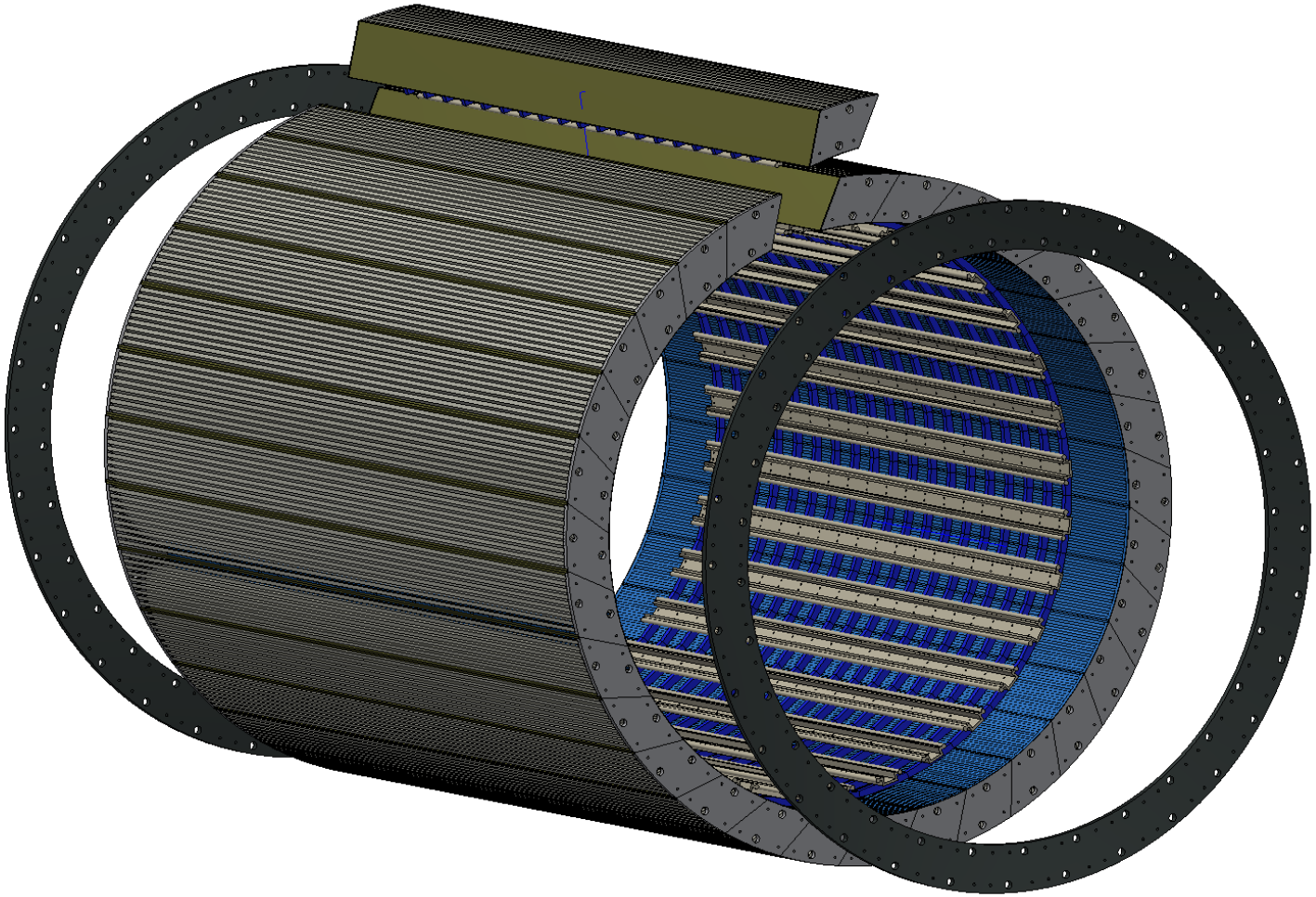
Basic features

- Detector fits through door meaning it can be put together in Assembly Hall once PHENIX decommissioning is complete—giving us much more latitude in construction
- HCAL modules assembled into detector
- Inner HCAL provides support structure for EMCAL

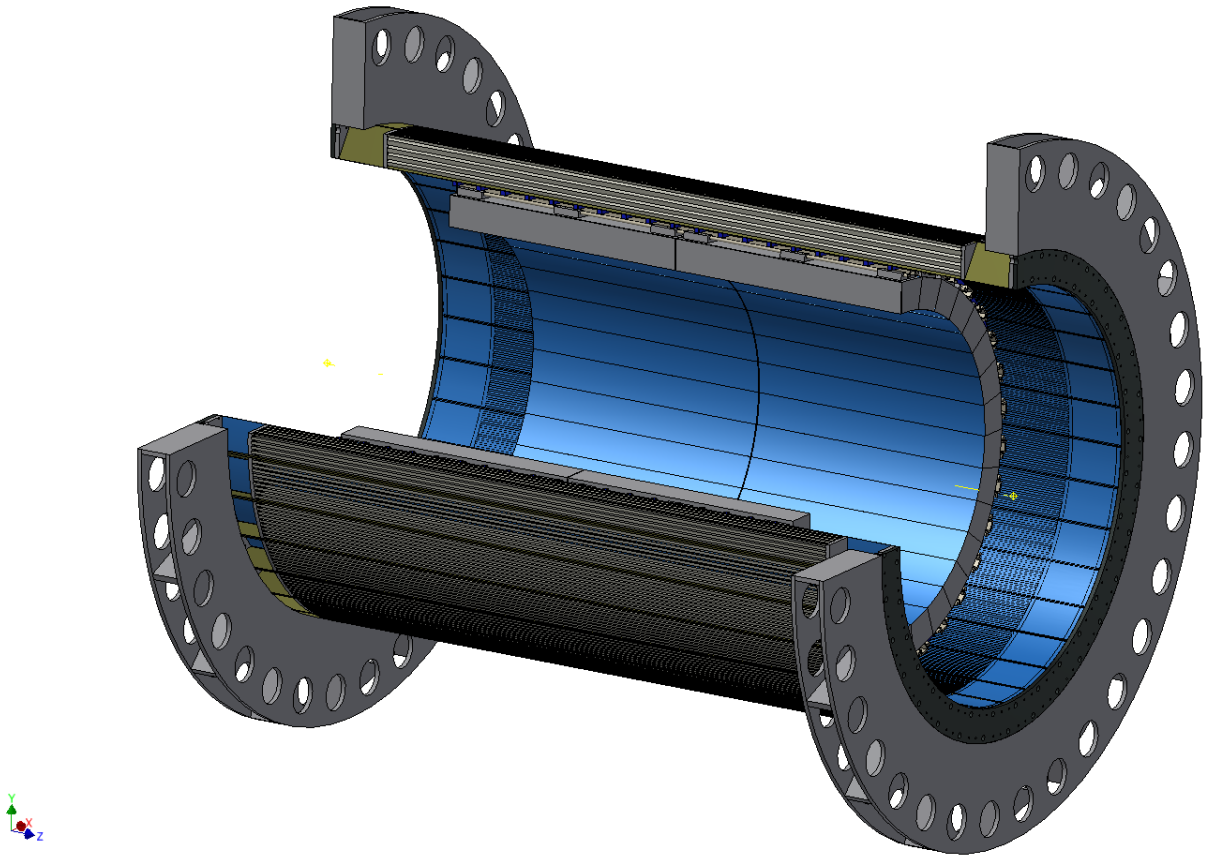
Inner HCAL



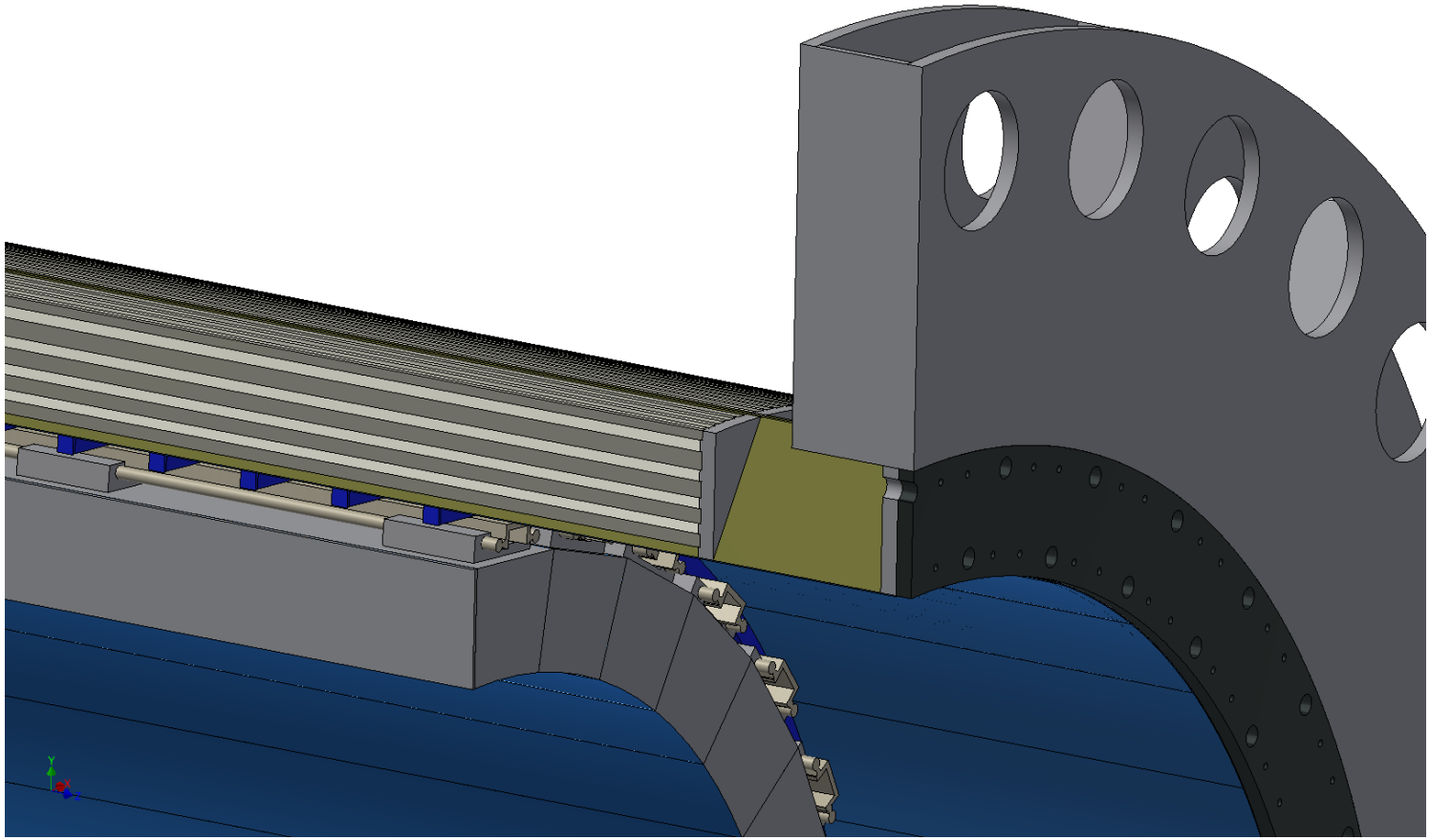
Inner HCAL exploded view



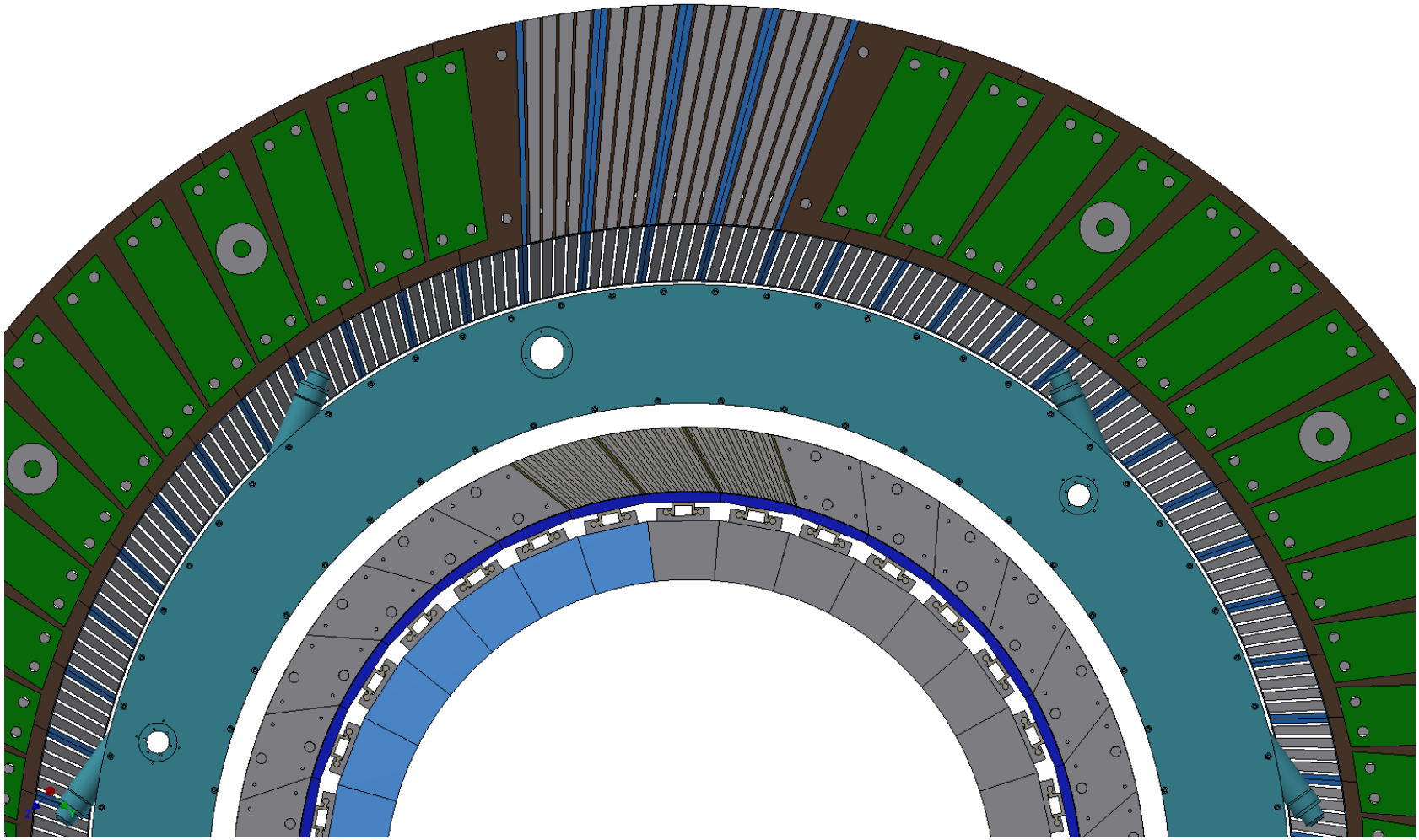
Inner HCAL support wheel



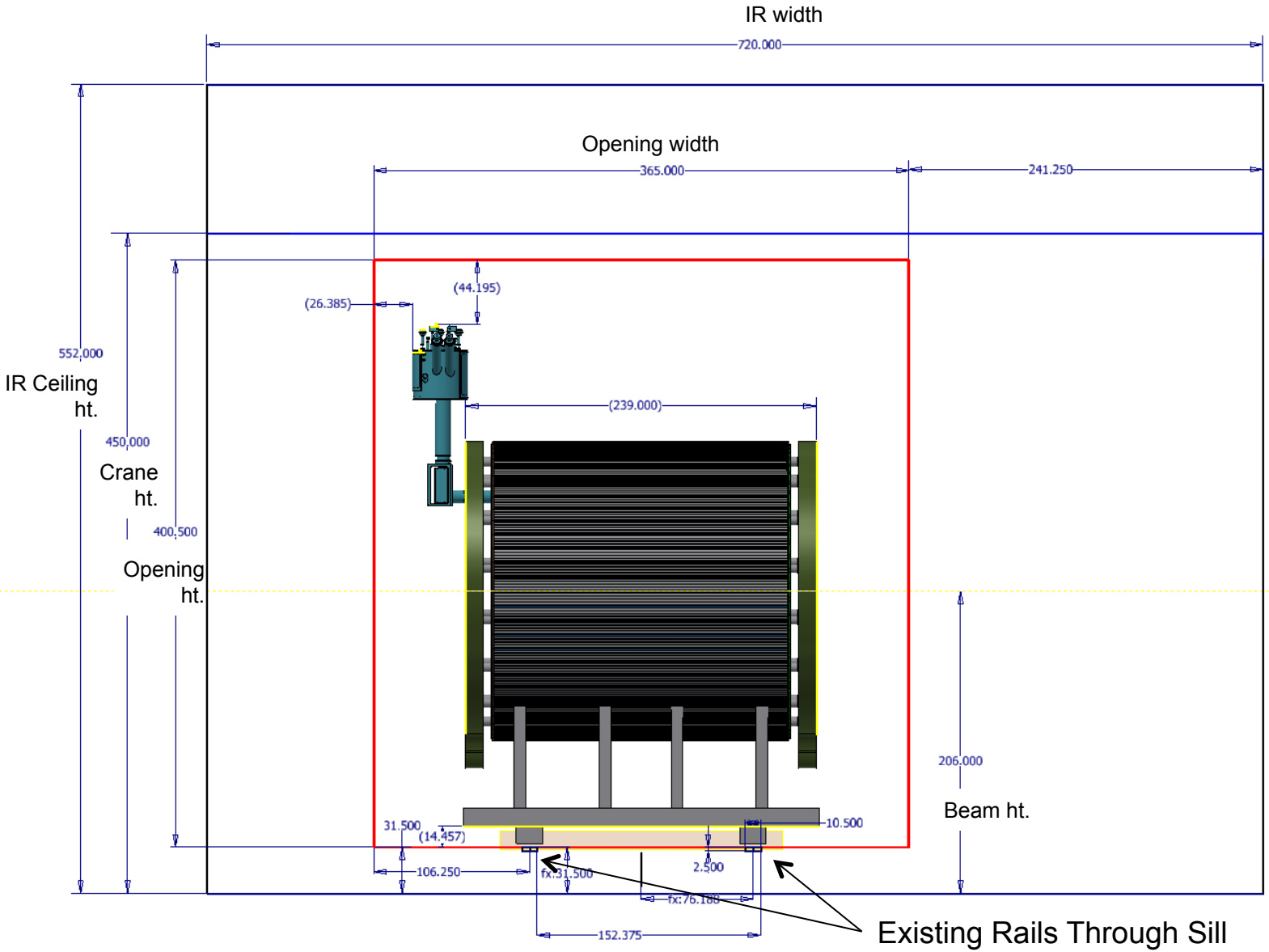
Detail of inner HCAL support

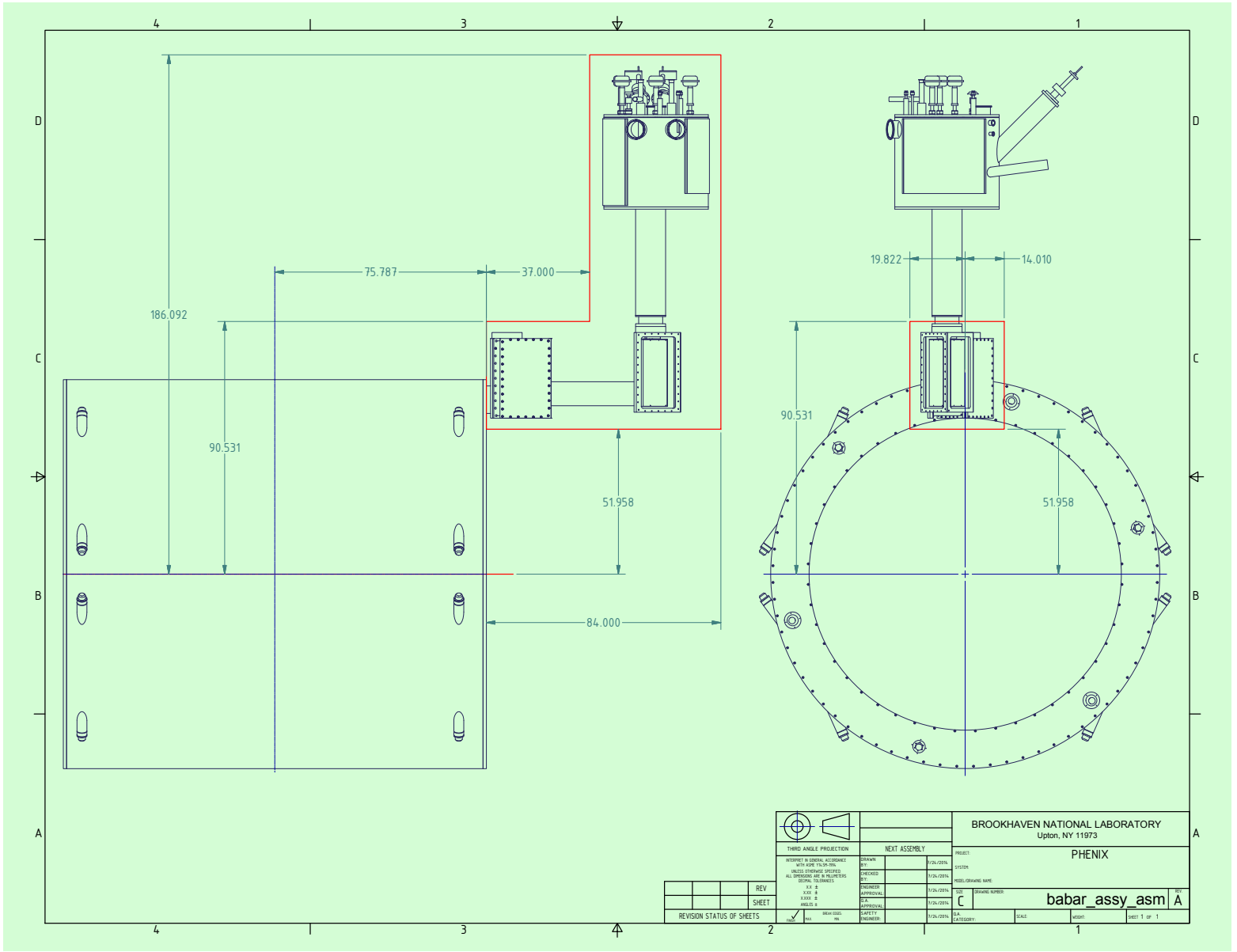


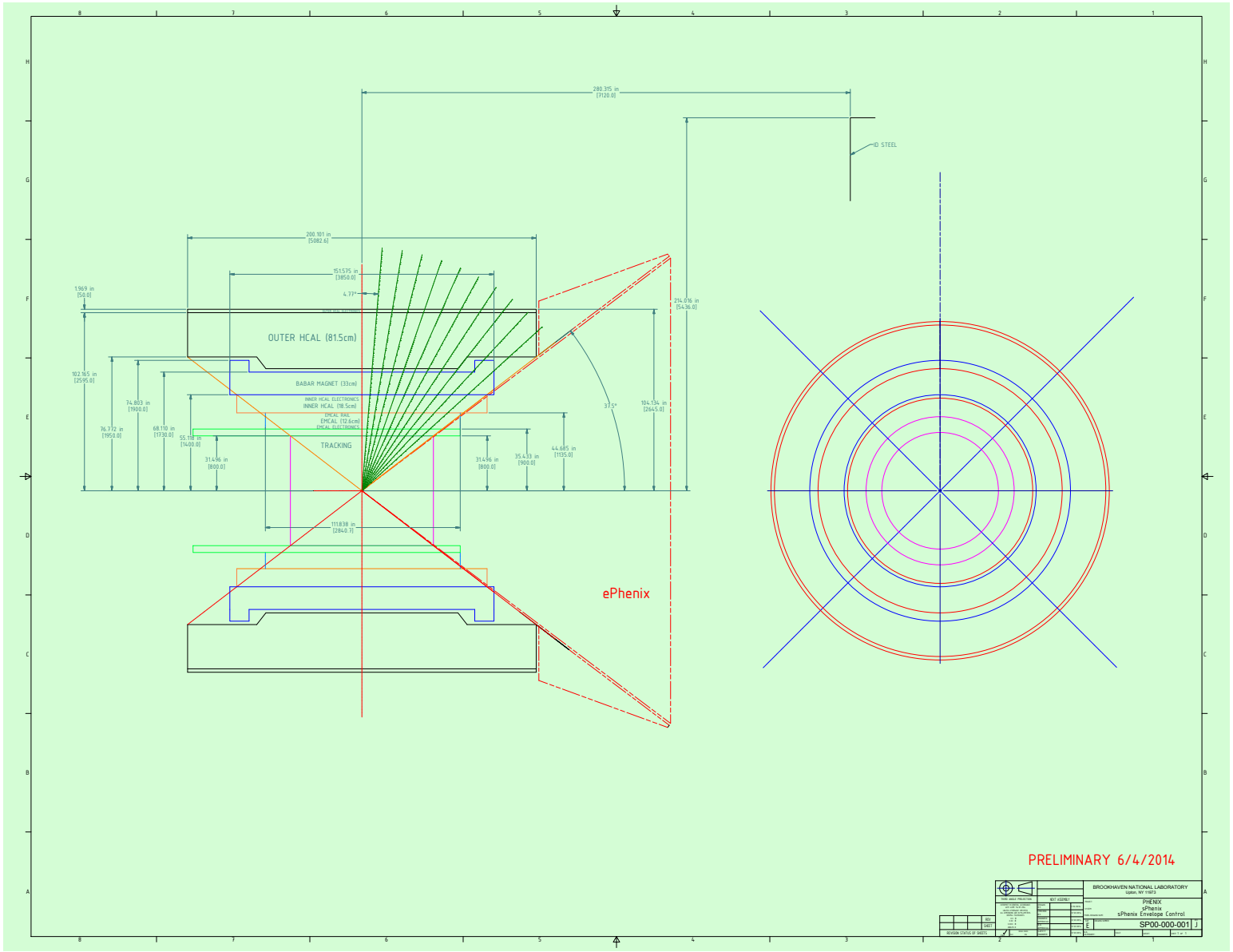
Inner and outer HCAL end view



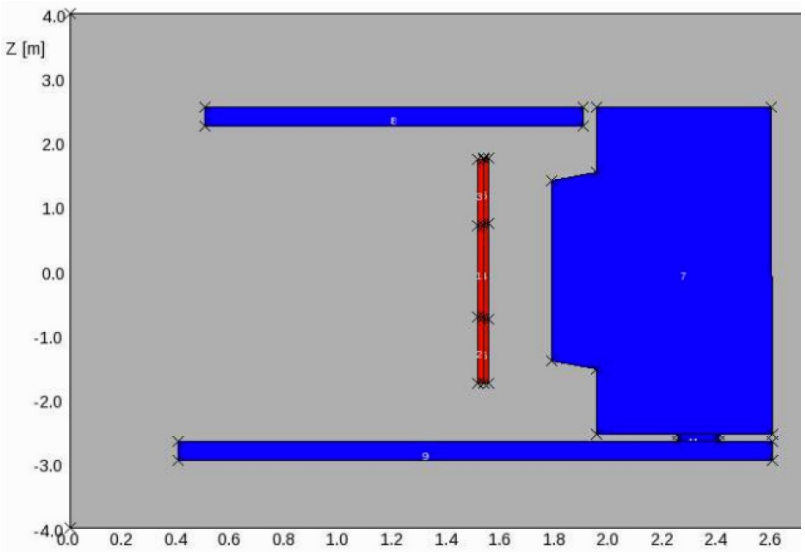
sPHENIX detector shown in PHENIX shield door opening

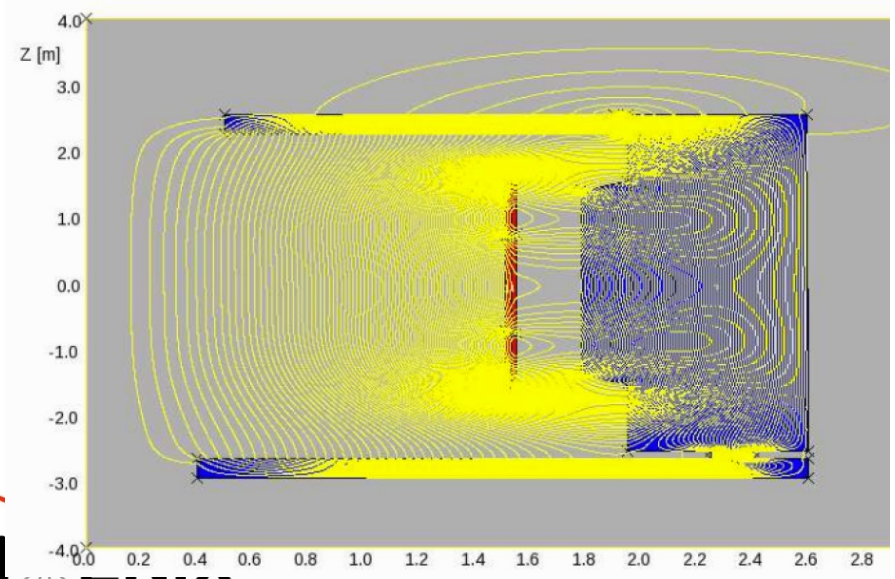



75.787
37.000
186.092
90.531
51.958
84.000
19.822
14.010
90.531
51.958
BROOKHAVEN NATIONAL LABORATORY
Upton, NY 11973
PHENIX
babar_assy_asm
THIRD ANGLE PROJECTION
NEXT ASSEMBLY
REVISION STATUS OF SHEETS
REV
SHEET


280.315 in [7120.0]
ID STEEL
200.101 in [5082.6]
151.575 in [3850.0]
4.77°
1.969 in [50.0]
214.016 in [5436.0]
OUTER HCAL (81.5cm)
102.165 in [2595.0]
BABAR MAGNET (33cm)
74.803 in [1900.0]
INNER HCAL ELECTRONICS
INNER HCAL (18.5cm)
EMCAL RAIL
EMCAL (12.6cm)
EMCAL ELECTRONICS
37.5°
104.134 in [2645.0]
76.772 in [1950.0]
68.110 in [1730.0]
55.118 in [1400.0]
TRACKING
314.96 in [800.0]
314.96 in [800.0]
35.433 in [900.0]
44.685 in [1135.0]
111.838 in [2840.7]
ePhenix
PRELIMINARY 6/4/2014
BROOKHAVEN NATIONAL LABORATORY
Upton, NY 11973
PHENIX
sPhenix
sPhenix Envelope Control
SP00-000-001
J

Caps, Plugs, or Doors

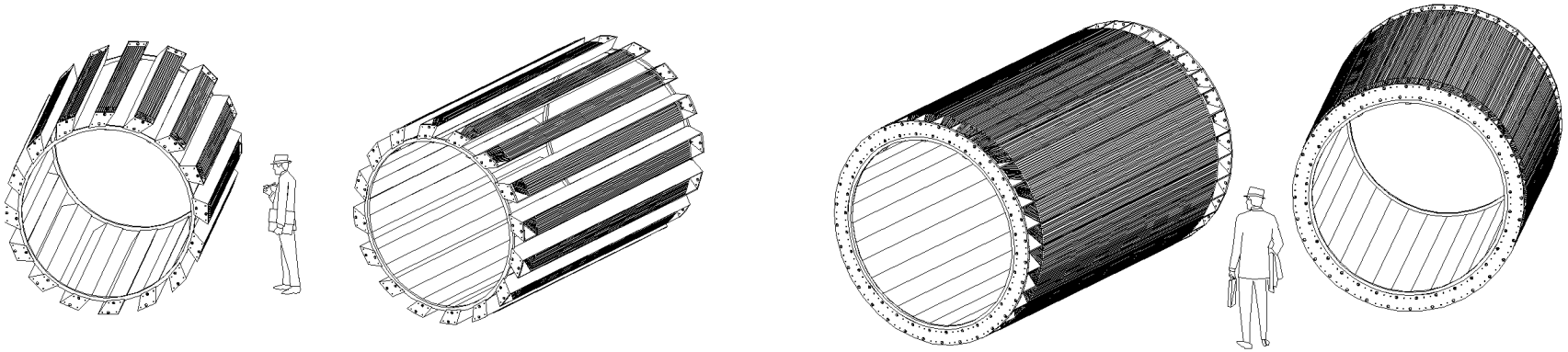




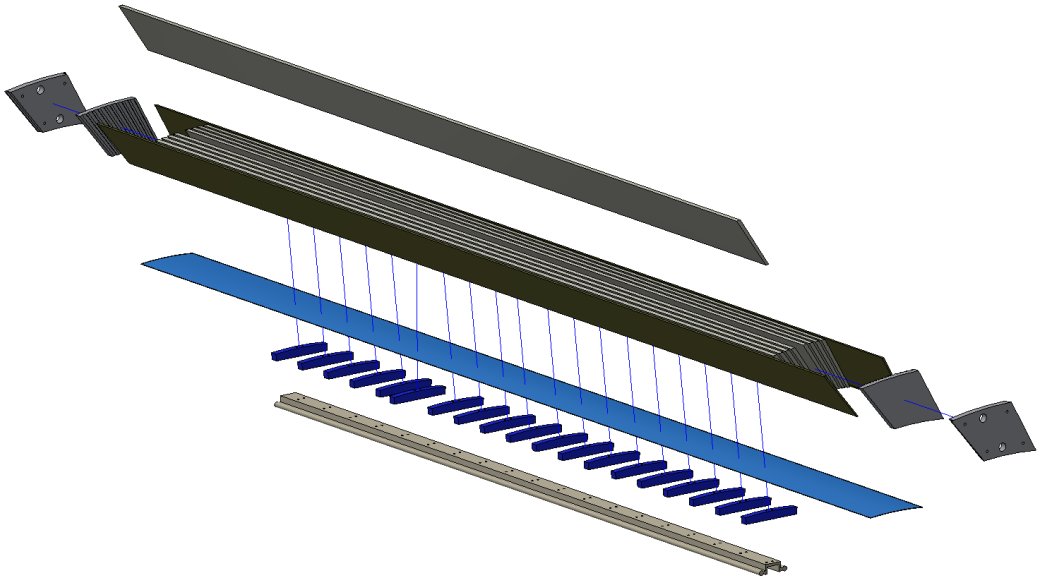
BACKUP

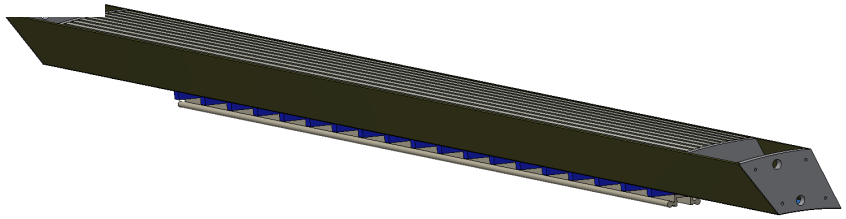
ASSEMBLY CONCEPTS

Inner HCAL assembly



Inner HCAL modules

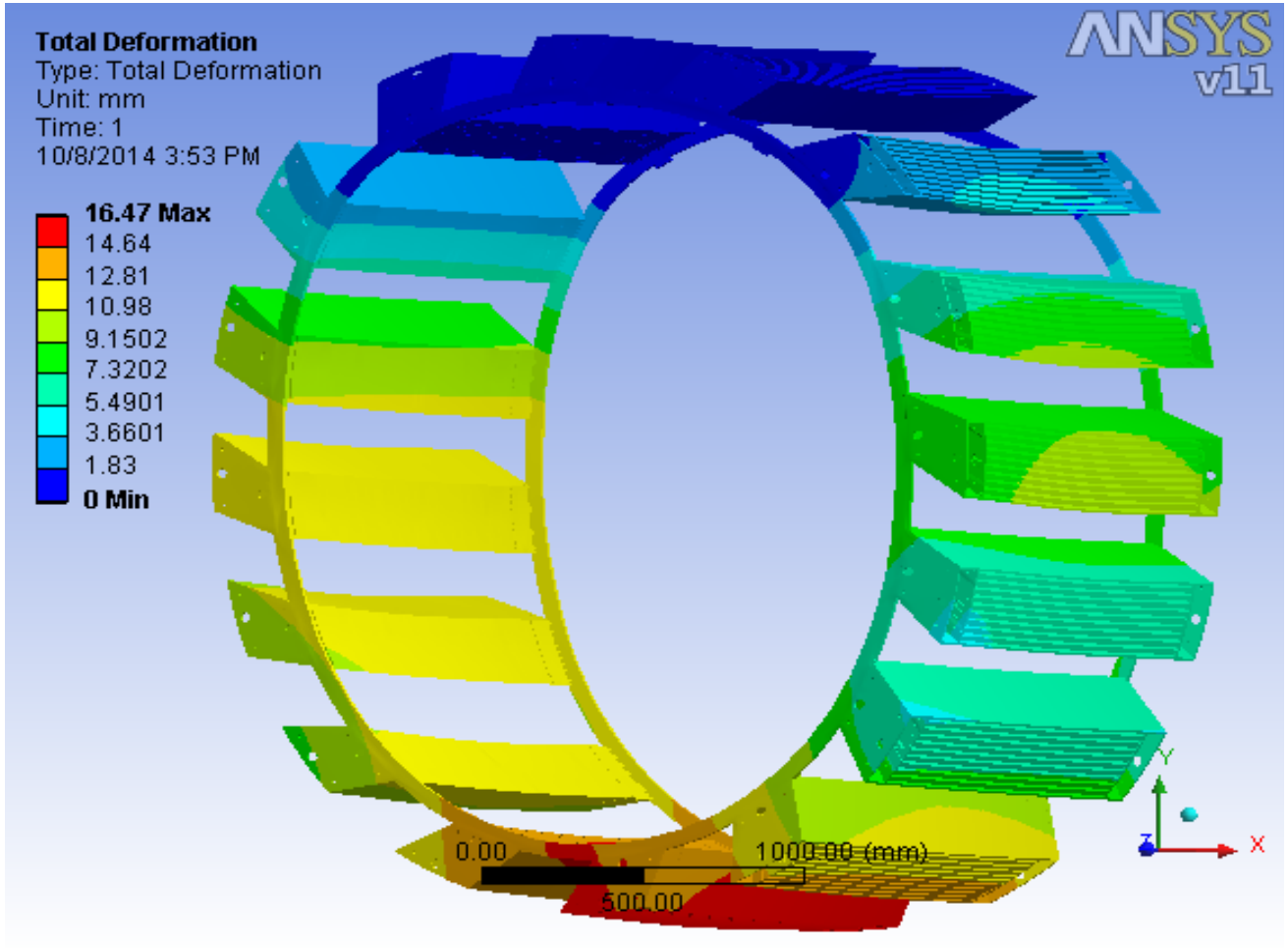




Assembly, analysis, integration

- Anatoli has done a very good job in analyzing stress and displacement in the detector and during assembly (example to follow)
- Anatoli, Don, and Richie have done a nice job f working out the major steps in assembly (part of WBS 1.09 Infrastructure and System Design, example to follow)

Deformation analysis during assembly



Assembly of inner HCAL